

The Amorium Project: The 1995 Excavation Season

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INTRODUCTION

The Amorium Project was initiated in 1987 by the late Professor R. Martin Harrison of Oxford University. After an initial year devoted to survey work, a full excavation permit was obtained from the Turkish authorities and digging began in earnest in 1988. Preliminary reports have appeared annually in *Anatolian Studies*; a short bilingual guidebook to the site was published in 1994, and several other articles and reports about the work at Amorium have also appeared.¹ The year 1995 marked

the eighth season of excavations,² and from the outset the project's main objectives have been clearly defined and have remained constant: to trace through the archaeological record the

*Compiled with the assistance of other team members, notably Margaret Gill, Yalçın Mergen, and Simon Mortimer.

¹R. M. Harrison, "Amorium 1987, a Preliminary Survey," *AnatSt* 38 (1988), 175–84; idem, "Doğu Phrygia'da Amorium (Hisarköy) Yüzey Araştırması," in *VI. Araştırma Sonuçları Toplantısı, Ankara, 23–27 Mayıs 1988* (Ankara, 1989), 191–200; idem, "Amorium 1988, the First Preliminary Excavation," *AnatSt* 39 (1989), 167–74; idem, "Emirdağ (Afyon)'da Amorium Birinci Kazı Raporu," in *XI. Kazı Sonuçları Toplantısı II, Antalya, 18–23 Mayıs 1989* (Ankara, 1989), 155–65; R. M. Harrison et al., "Amorium Excavations 1989, the Second Preliminary Report," *AnatSt* 40 (1990), 205–18; R. M. Harrison, "Amorium 1989," in *XII. Kazı Sonuçları Toplantısı II, Ankara, 28 Mayıs–1 Haziran 1990* (Ankara, 1991), 251–68; R. M. Harrison et al., "Amorium Excavations 1990, the Third Preliminary Report," *AnatSt* 41 (1991), 215–29; R. M. Harrison et al., "Amorium Excavations 1991, the Fourth Preliminary Report," *AnatSt* 42 (1992), 207–22; R. M. Harrison, "Amorium 1991," in *XIV. Kazı Sonuçları Toplantısı II, Ankara, 25–29 Mayıs 1992* (Ankara, 1993), 247–59; R. M. Harrison, N. Christie, et al., "Excavations at Amorium: 1992 Interim Report," *AnatSt* 43 (1993), 147–62; C. S. Lightfoot, "Amorium kazıları 1992," in *XV. Kazı Sonuçları Toplantısı I, Ankara, 24–28 Mayıs 1993* (Ankara, 1994), 503–14; C. S. Lightfoot et al., "Amorium Excavations 1993, the Sixth Preliminary Report," *AnatSt* 44 (1994), 105–28; C. S. Lightfoot, "Amorium kazısı 1993," in *XVI. Kazı Sonuçları Toplantısı II, Ankara, 30 Mayıs–3 Haziran 1994* (Ankara, 1995), 131–51; C. S. Lightfoot and E. A. Ivison, "Amorium Excavations 1994, the

Seventh Preliminary Report," *AnatSt* 45 (1995), 105–36; C. S. Lightfoot, "Amorium kazısı 1994," in *XVII. Kazı Sonuçları Toplantısı II, Ankara, 29 Mayıs–2 Haziran 1995* (Ankara, 1996), 361–73; C. S. Lightfoot, E. A. Ivison, et al., "Amorium Excavations 1995, the Eighth Preliminary Report," *AnatSt* 46 (1996), 91–110; C. S. Lightfoot, "1995 yılı Amorium kazısı," in *XVIII. Kazı Sonuçları Toplantısı, Ankara, 27–31 Mayıs 1996* (Ankara, 1997), 431–47. See also R. M. Harrison, "Amorium: Answers and Questions," in *XI. Türk Tarihi Kongresi, I* (Ankara, 1994), 393–96, pls. 133–38; C. S. Lightfoot, *Amorium: A Brief Guide to a Late Roman and Byzantine City in Central Anatolia* (Istanbul, 1994) (in English and Turkish); idem, "Unearthing a Byzantine City: Excavations at Amorium, Turkey," *Minerva* 5.1 (1994), 14–16; idem, "A New Anonymous Follis from Amorium," *NCirc* 103.10 (1995), 376; idem, "New Discoveries at Amorium, Turkey," *Minerva* 7.4 (1996), 25–28; idem, "Doukas and Amorium: A Note," *JÖB* 46 (1996), 337–40; M.-H. Gates, "Archaeology in Turkey," *AJA* 98.2 (1994), 276–77, fig. 29; *AJA* 99.2 (1995), 251, 253, figs. 39–41; and *AJA* 100.2 (1996), 332–33, fig. 43.

²This was also the first year in which the project received a grant from Dumbarton Oaks, Trustees for Harvard University. It may be doubted whether any fieldwork would have been possible without this generous funding. The team comprised Christopher Lightfoot (director), Eric Ivison (assistant director), Margaret Gill (glass), Karen Barker (conservator), Yalçın Mergen, Simon Mortimer (field archaeologists), and Osman Kızılkılıç (general assistant). Seven students from universities in Turkey, Britain, and the United States also took part in the excavations and contributed greatly to the success of the season; they were Mücahide Koçak, Ayşe Taşkın, Feriizat Ülker, and Hasan Yılmazyaşar (all from the University of Anatolia, Eskişehir), Betül Şahin (Ankara University), Paola Pugsley (Exeter University), and Thomas Bihl (Indiana University). The government representative was Mrs. Sema Dayan from the Directorate of Monuments and Museums at the Ministry of Culture in Ankara.

Part of the 1995 work is reported in *AnatSt* 46 (1996), 91–110. This includes a description of the rescue excavation at a rock-cut tomb in the necropolis southwest of

developments and changes the city underwent in the period between late antiquity and the end of the Middle Ages, concentrating particularly on the Byzantine dark age. Nowhere else in Turkey had this been attempted, and indeed Amorium was recognized as an ideal site at which to carry out such an investigation for two reasons: as the capital of Anatolikon, the largest and most powerful theme in the Byzantine Empire, it was probably the greatest and most important city in Anatolia during the middle Byzantine period; and as the site is now largely abandoned and has not been covered with a massive overburden resulting from Ottoman and modern Turkish occupation, it provided ideal conditions in which to carry out excavations. A subsidiary aim, of course, has been to find archaeological evidence for the Arab siege of 838 to complement the well-known historical accounts. The retrieval of scientific data from destruction layers would not only allow them to be identified with the events of 838 but would also provide a clear archaeological horizon from which to work both backward and forward. An absolute date in the mid-ninth century for certain stratigraphic deposits would provide a chronological framework that has until now been largely lacking in the archaeology of the middle Byzantine period in Anatolia. The result would be a much better understanding of the urban environment and material culture in a part of the Byzantine world that is still very poorly known.

Amorium is a large site (Fig. A). The area enclosed by the Lower City walls measures some 65 ha, and only a small proportion of this has been excavated so far. The first eight years of work have been directed principally toward investigating the layout and extent of the dark age settlement, and, despite limited funding and short excavation seasons, a great deal has already been learned about the history and archaeology of the Byzantine city. In 1995 our efforts were directed toward three trenches,

one in the Upper City and two in the much larger Lower City.

THE LOWER CITY CHURCH

The excavation of this building has been continuing since 1990, and it is now possible to trace the occupational history of the building from its construction through its final abandonment approximately a thousand years later. Close examination of the surviving structure in 1994 had led us to the conclusion that there were only two main phases of construction, not three as previously suggested (Fig. B).³ The building was originally an aisled basilica (Phase I), constructed probably toward the end of the fifth century, but it was massively rebuilt and turned into a domed basilica (Phase II) in the middle Byzantine period. In 1995 we aimed to excavate the remaining post-Christian/Turkish levels on the north side of the naos and in the central bay of the north aisle. This enabled us to complete the study of the plan and construction of the final ca. 70 m² of the *opus sectile* Pavement B in the naos, dating to the middle Byzantine Phase II, and to examine whether any traces of its late antique predecessor, Pavement A, survived.

Work was carried out in several areas of the building:

1. Trench A2-1, the north side of the central and western naos;
2. Trench A2-2, the central bay of the north aisle, the archway between the eastern and central bays of the north aisle, then occupied by the post-Byzantine Wall 54, and the archway between the western and central bays of the north aisle, occupied by the post-Byzantine Wall 53;
3. Trench A1, the archway between the western bay of the north aisle and the western naos; and
4. Trench A3-1, the north side of the bema and the archway between the bema and the eastern bay of the north aisle, occupied by Wall 56.

Late Antique Phase I: Pavement A and the Ambo

No trace of Pavement A was found in Trench A2-1, largely owing to the good state of preser-

Amorium, a detailed account of the conservation work and related topics, and discussions of various groups of finds. The project is extremely grateful for all the help and encouragement that it receives from the Turkish authorities, especially that provided by Prof. Dr. Engin Özgen (formerly director-general) and the staff of the Directorate of Monuments and Museums.

³ *AnatSt* 45 (1995), 107.

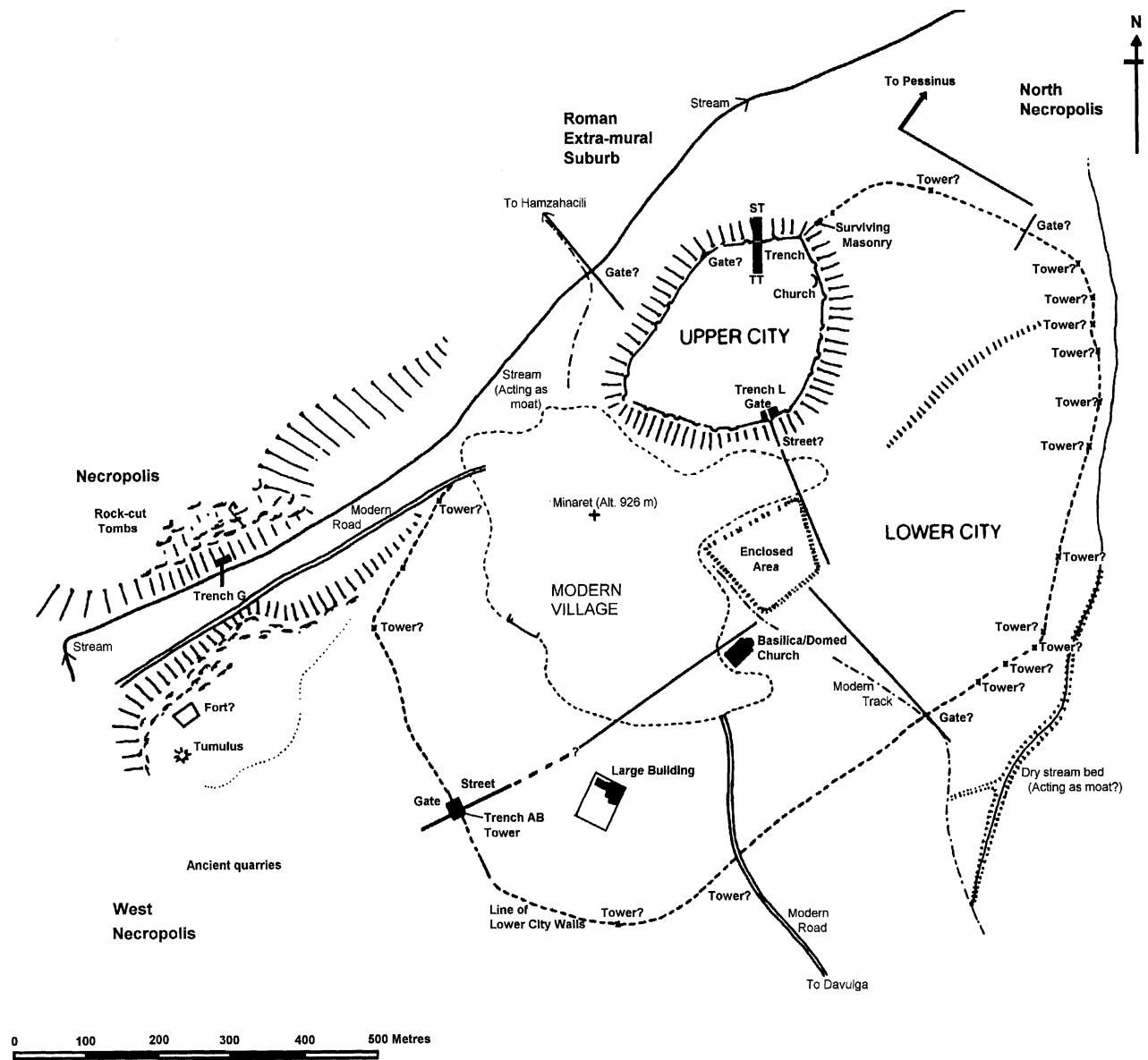


Fig. A Sketch plan of Amorium, 1988–95 (after H. Welfare, H. Dodge, and A. Wilkins, *AnSt* 38 [1988], 178, fig. 2)

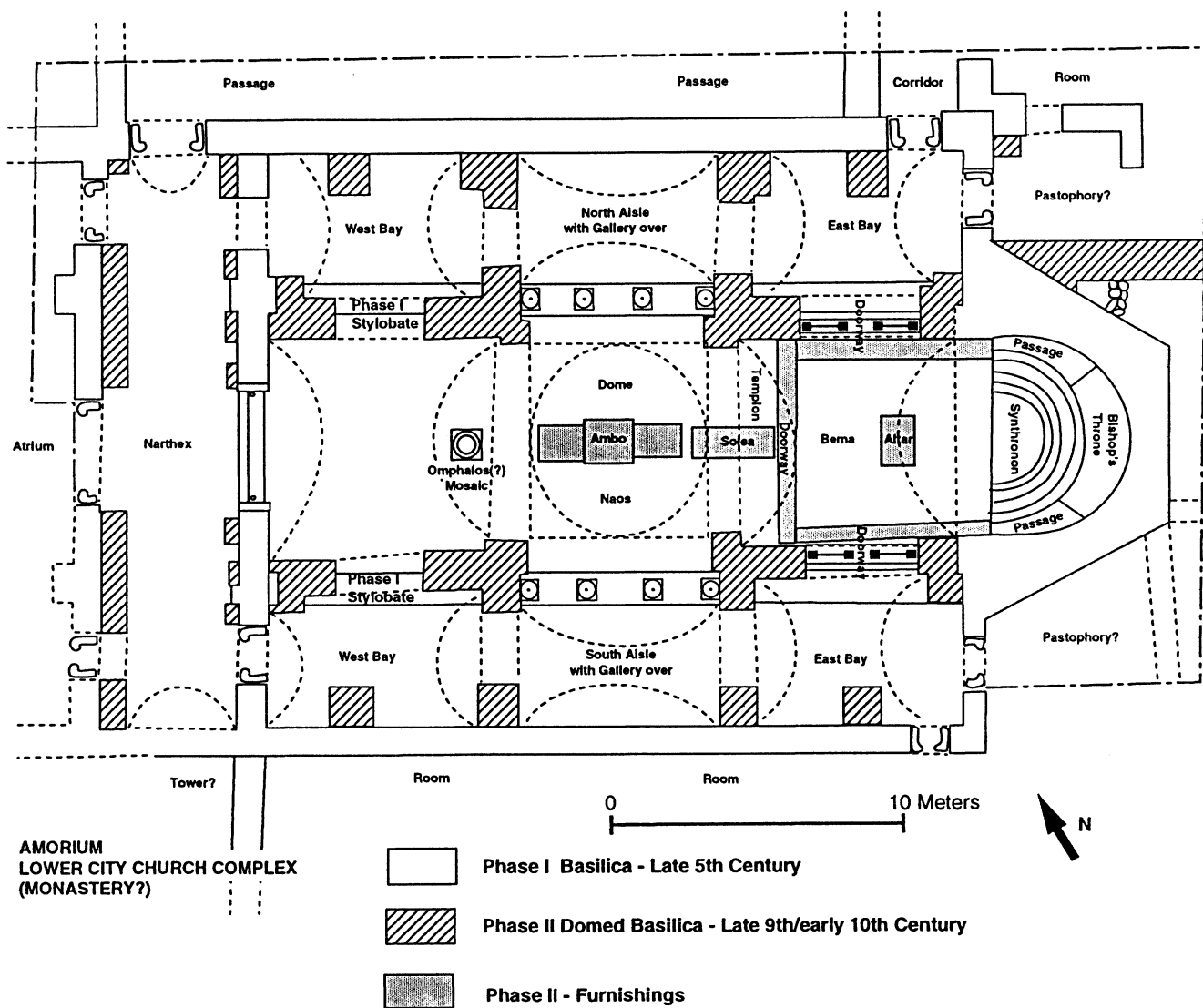


Fig. B Sketch plan of Lower City church (drawing by A. Darling and E. Ivison)

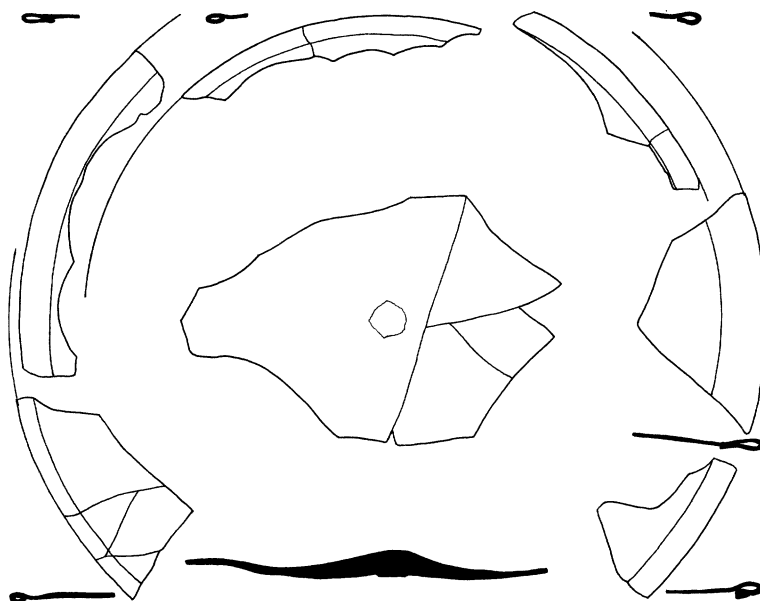
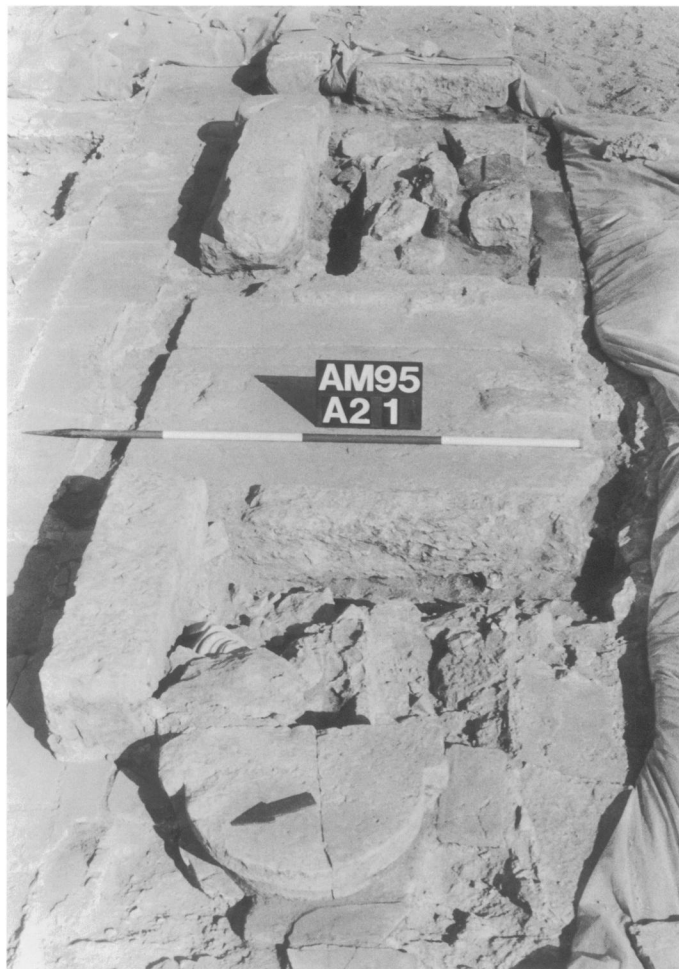


Fig. C Fragments of bull's-eye window panes found in the Lower City church (scale 1:2) (drawing by M. Gill)



1 Lower City church, ambo foundation (Neg. AM95/11/7A)



2 Lower City church, detail of block in ambo foundation (Neg. AM95/13/22)



3 Lower City church, detail of fire-damaged block in main north wall (Wall 7) (Neg. AM95/13/28)



4 Lower City church, central section of Pavement B to the north of the ambo (Neg. AM95/11/11A)



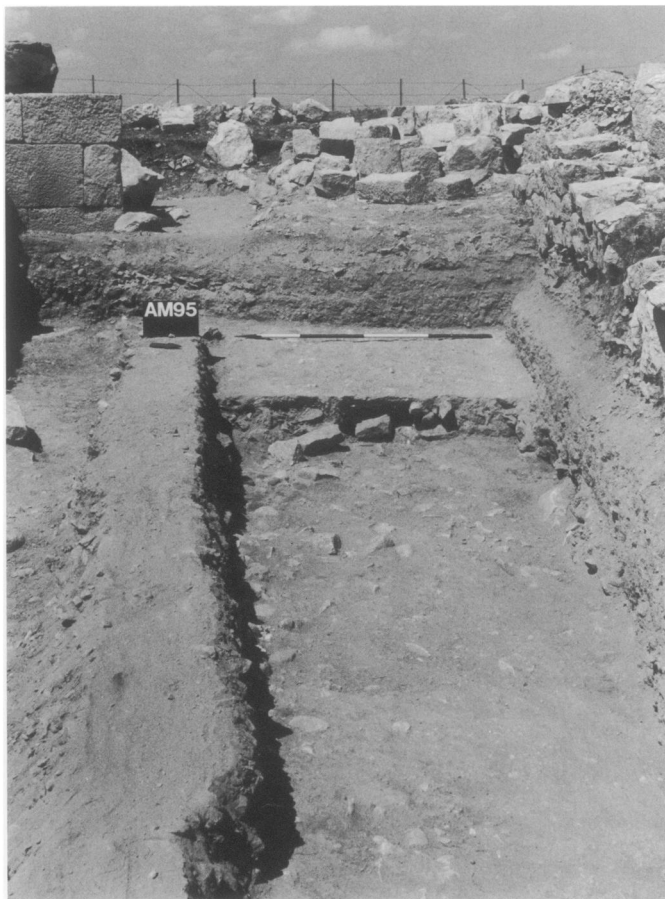
5 Lower City church, tile floor in the central bay of the north aisle (Neg. AM95/11/15A)



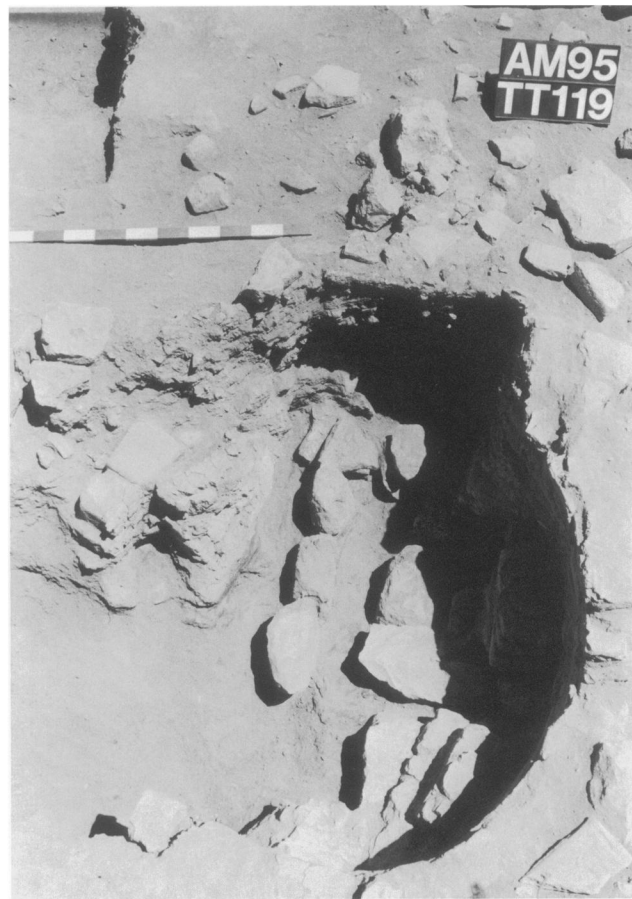
6 Lower City church, ambo parapet slab (T750, joined with T130) (Neg. AM95/11/16A)



7 Lower City church, window recess in main north wall (Neg. AM95/07/34)



8 Lower City gateway, Trench LC1, road surface
(Neg. AM95/03/0)



9 Upper City, Trench TT, potter's kiln
(Neg. AM95/08/31)



10 Upper City, Trench TT, pithoi in situ (Neg. AM95/08/12)

vation of the middle Byzantine floor (Pavement B).

Excavation of the stylobate in Trench A3-1 uncovered settings for the first two column bases of the north colonnade of the Phase I basilica. These were centered by the cross markings similar to ones noted in previous seasons but were also numbered by masons' marks as A' (*alpha* = 1) and B' (*beta* = 2).⁴ They are the first masons' marks to have been recognized in the building. Other column settings are buried beneath the Phase II piers, but it is now possible to trace the entire length of the stylobate on both sides of the naos.

The full extent of the templon stylobate has now been traced in the bema (Trench A3-1). This is made up of four blocks on the south and north sides, not five as had previously been suggested.⁵ The site of the north door was also identified directly opposite that on the south side. Only one dowel for a baluster post was preserved, the other having been cut away in the middle Byzantine rebuilding.

The site of the Phase I ambo is occupied by its middle Byzantine successor, and consequently most traces of the former have been obliterated by the latter's foundations and particularly by the massive threshold that acted as its central support (Fig. 1). A robbed foundation under the Phase II west staircase may, however, be part of the late antique structure, for the impressions of foundation blocks are still visible. It also seems likely that the north block of the eastern staircase is still in situ, for it is enclosed by the middle Byzantine Pavement B. This block (Fig. 2) is of white marble, with a cable and cavetto molding similar to the Phase I templon stylobate. Its eastern surface is worn from the frequent passage of feet and has a dowel for siting a baluster post. The rest of the block's top surface is roughened for the siting of the stair rail and treads. Another staircase foundation block identical to that still in situ was found in the south naos in 1993. Another fragment from the curved central portion of this ambo was also found this year, the moldings of which closely correspond to the staircase foundation blocks. Other fragments that may belong to this late antique ambo have

already been stored in the depot. All are of reddish-purple veined marble and consist of molded panel fragments, perhaps from staircases, and the upper part of a curved panel from a central parapet.

Evidence for the destruction of the Phase I basilica by fire was recognized this year on the interior faces of Phase I walls. Large areas of Walls 7 (Fig. 3) and 47 and a portion of the apse were found to be blackened by smoke and to be shattered as the result of exposure to extreme heat. This damage must predate the middle Byzantine rebuilding, as it was sealed by the piers of the Phase II church and concealed by the earliest layer of fresco. Efforts had also been made during the rebuilding to patch up the most seriously affected areas with plaster. Blackened Phase I blocks, presumably from demolished walls, were also jumbled up among the spolia in the Phase II piers. The lower parts of the Phase I walls were the most badly damaged and blackened, suggesting that wooden roof beams had collapsed against the walls and continued to burn as they lay at floor level. The same phenomenon was observed in 1993 during the excavation of the massive destruction layer in the triangular tower on the Lower City walls.⁶ The fire damage to both structures helps to explain in part the poor condition of the exposed stonework.

To judge from the scorched walls around the basilica, and from the calcined and shattered fragments of the Phase I furnishings and fittings, the fire had been an extensive and severe conflagration. Portions of the marble revetment must have been shattered by the intense heat, causing them to fall from the walls and thus exposing the limestone masonry to the fire. The effects of major fires on basilicas have been well documented. Accidental fires in 1823 and 1917 destroyed the basilicas of S. Paolo Fuori le Mura in Rome and St. Demetrius at Thessalonica. The extensive wooden roofs of these basilicas made them especially vulnerable to fire. In both cases the destruction and collapse of the roof brought down the nave colonnades, while heat destroyed the marble revetment.⁷ These disasters suggest

⁴*AnatSt* 44 (1994), 110–11.

⁴Height of letters: A—0.05 m; B—0.095 m.

⁵*AnatSt* 45 (1995), 109–10.

⁷See R. J. Mainstone, *Hagia Sophia: Architecture, Structure and Liturgy of Justinian's Great Church* (London, 1988), 145, figs. 168–69.

a similar pattern of destruction for the late antique basilica at Amorium, a pattern that can still be traced within the rebuilt Phase II church. The Corinthian capitals of the naos and the interior furnishings were used only as building materials, probably because they were too badly damaged for reuse. Large pieces of polished red breccia column shafts are also built into the cores of the Phase II piers, and it is possible that these are from the destroyed nave colonnade.

Middle Byzantine Phase II: The Bema, Pavement B, and the Ambo

Detailed examination of the north and south templon stylobates now suggests that they were moved to allow the middle Byzantine rebuilding, albeit without disturbing their order. This is implied by the cutoff return corners of the western stylobate (which is still firmly bedded in situ) and the fact that the north and south stylobates are not at 90-degree angles to the western templon stylobate and that the Phase I markings on their surfaces can still be read coherently. In addition, the dowels for the Phase I doorways on the north and south sides are still opposite one another. As on the south side, the molded step of the northern blocks abuts the middle Byzantine walls and was concealed by marble scraps. The site of the Phase I north door was partially cut down and patched with matching marble, perhaps to repair its worn or damaged surface.

On the north edge of the Phase II bema a raised step was found in a position corresponding to that found on the south side. Both steps were located in the archways into the eastern bays and were higher than the bema pavement. The pavement in the east bay of the north aisle (and so presumably also in the south aisle) was lower than both. Like the south bema step, the north step had settings for a screen, consisting of four baluster posts, probably with colonnettes and an epistyle above, framing two closure slabs, one to either side of a central doorway.

Excavation has confirmed that a tiled pavement ran without interruption from the central to the eastern bay of the north aisle. No cuttings for a screen to close off the eastern bay as a prothesis were present. This evidence,

therefore, raises the question of the liturgical arrangements in the middle Byzantine church. Clearly, the eastern bays of the side aisles did not serve as the prothesis or diakonikon but rather led on to exterior doorways and the pascophoria further east. The latter chambers did not communicate with the bema and so cannot have served a liturgical purpose either. Perhaps, as in other late antique churches and basilicas that served into middle Byzantine times, screened-off parts of the bema itself had to be adapted to these new liturgical needs.

Pavement B was found to be in a better state of preservation on the north side of the naos than on the south (Fig. 4). Almost all of the large slabs had been removed in the post-Byzantine period, but their frames and mortar beds were largely intact. As found elsewhere in the church, Pavement B was separated from the late antique Pavement A by an earth packing, which in the naos was visible in a number of pits through the mortar bedding. This earth fill was largely sterile and extremely hard, having been compacted between the pavements. Under it was found a loosely packed jumble of crushed stone rubble, coarsely cemented together. Whether this represents a foundation for Pavement A, which has been completely removed, or another layer of stone packing, such as that encountered in the bema, is not yet clear. The cement beds and slabs of Pavement B in the naos were thinner than in the bema, nor were any stone wedges visible to help support the large slabs.

Pavement B was carefully designed to fit the naos and the crossing under the main dome. In the naos proper the pavement has a strictly axial east-west design, laid out to either side of the ambo, which occupied the center of the church (Trench A2-1). As found at the west end, the design was of large rectangular slabs surrounded by frames of small marble tiles cut into a variety of geometric shapes. These shapes included lozenges, squares with cutoff corners, and triangles, usually arranged in repetitive panels. Long rectangular slabs divided the main naos at a line drawn between the arch of Piers 52 and 55. North of them the pavement was divided into three panels, again composed of rectangular slabs of marble but surrounded by more complex frames of geometric tiles. To the north the pavement was bordered

by the raised step of the Phase I stylobate, the edge of which appears to have been cut down to provide a stepped foundation for the new pavement. The same treatment was also noted on the north side of the bema, where the templon stylobate was also trimmed back for the same purpose (Trench A3-1).

At the west end of the naos (Trench A1), an area of pavement under and just south of the arch between Walls 55 and 49 was found to be made up of rectangular and square terracotta tiles. The pavement was well laid and seems to be contemporary with the use of the adjacent marble pavement, for it does not appear to be a repair. This may be contrasted with the corresponding area on the south side, which was paved with an elaborate design of marble disks and polygonal panels.⁸

The pavement in the central bay of the north aisle (Trench A2-2) was also paved with terracotta tiles. This forms part of a continuous pavement running the whole length of the north aisle.⁹ The pavement is best preserved at the sides to east and west, where it continues through to the intercommunicating bays. In the western half of the bay it is made up of rectangular tiles, while in the eastern part the tiles are square. Although the tiles have been badly cracked, it is clear that the pavement was laid with care, as in the case of that in Trench A1. In the northwest corner the pavement and walls had been heavily whitewashed (Fig. 5). Several coats are visible, and they extend without interruption from the lower walls down onto the pavement, indicating that they were applied at the same time. The significance of this whitewash, which shows no sign of paint, is not yet known. It may constitute a late repair, but it seems restricted in its location, as no traces of it have been found on other walls that still retain patches of painted fresco.

The excavation of the Phase II ambo foundation was also completed during the season (Fig. 1). This was better preserved on its north side, providing valuable information about its construction. It seems that the ambo was laid out on the site of its predecessor in the middle

of the naos, being directly beneath the main dome of the Phase II basilica. It follows the standard design, found throughout the Byzantine world, consisting of a central raised superstructure approached by staircases to the east and west. A huge foundation pit was dug through the earlier pavement, perhaps to the foundations, to accommodate a reused door threshold. This massive slab acted as a very solid support for the raised central superstructure, which was the heaviest part of the ambo. The staircases were built on the Phase I foundations or surviving blocks, such as that of the east staircase, which remained in situ. Other staircase foundation blocks were cemented to Pavement B, showing that the construction of the ambo took place in two stages: the larger foundation blocks were put in place before Pavement B was laid, while the minor elements and superstructure were inserted after the pavement was largely finished. The interior of the staircase foundations was filled with discarded marble scraps and chippings, fieldstones, and other building debris, including a broken white marble baluster post, presumably part of the destroyed Phase I furnishings. Other blocks, found in Seljuk levels, may be treads from these staircases. The central superstructure seems to have been roughly square and probably had a paneled lower story. It is not certain whether small columns helped to support this central part, for there are no markings for them on the surface of the foundation block.

Although large fragments of carved panels commensurate in size with an ambo had previously been recovered from the church, no conclusive proof of their identity was found until this year.¹⁰ The discovery of a well-preserved staircase parapet (Fig. 6), with its handrail partially intact, permitted the attribution of a large number of pieces, some joining with others from previous seasons. All are of matching bluish-gray marble, many recarved from late antique door frames. The pieces also form a set on the basis of matching style, motifs, and carving technique. At least two staircase parapets (of the set of four needed) have been recognized, together with several massive composite pieces, which probably revetted the

⁸*AnatSt* 45 (1995), 116, fig. 6, pl. xiv(a).

⁹The eastern and western sections were dug in 1991 and 1993 respectively; see *AnatSt* 42 (1992), 210; *Kazı* XV.1 (1994), 504, pl. 3, and *AnatSt* 44 (1994), 107; *Kazı* XVI.2 (1995), 132, fig. 1 (wrongly inserted as fig. 2).

¹⁰*AnatSt* 43 (1993), 158; *AnatSt* 44 (1994), 121, pl. xxi(a).

lower part of the central structure. Smaller panels carved in the same stone, style, and motifs may be the rails of the elevated pulpit. These may have been divided by baluster posts, also in bluish-gray marble, a number of which have been found in the church. Some balusters have attached colonnettes, but whether they supported a ciborium-like canopy or belonged to the templon is not yet certain. There is a set of small basket capitals of the same stone and style, and two elliptical epistyles in white marble with markings for capitals on their undersides, but further study is needed to determine whether they can be attributed to the ambo or other furnishings, such as an altar ciborium, tomb, or phiale (fountain). Nevertheless, the Amorium ambo is an important discovery, for it constitutes a welcome addition to the small number of preserved and excavated middle Byzantine examples.¹¹

It seems likely that the middle Byzantine church continued to use at least some of the late antique window openings in the outer aisle walls, for two windows are still extant in the main north wall (Fig. 7), while several detached windowsills can be found scattered in and around the building. Fragments of molded plaster window frames were among the most unusual of the season's finds. All of them were found in Seljuk levels, some apparently fallen from their settings in the walls above. Owing to the fragile nature of the material, these plaster frames were very fragmentary, but it is clear that they had been pierced by cusped roundels, some open, others framing circular panes of bull's-eye glass. The exteriors of the frames had been incised with shallow hatched and drilled decoration, some of which had also been highlighted with red paint. Similar molded plaster window frames are known from the eleventh-century Katholikon of Hosios Loukas in Greece and from the apse window in the Parekklesion of the Kariye Camii in Istanbul, but the Amorium frames are the only ones so far recorded from Anatolia.¹²

¹¹See J.-P. Sodini, "La sculpture médio-byzantine: Le marbre en ersatz et tel qu'en lui-même," in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 291 (with refs. in note 11); M. Dennert, "Mittelbyzantinische Ambone in Kleinasien," *IstMitt* 45 (1995), 137–47.

¹²R. W. Schultz and S. H. Barnsley, *The Monastery of Saint Luke of Stiris in Phocis* (London, 1901), 26, pls. 12 and

Large quantities of broken window glass were also found in the central bay of the north aisle; some of these fragments joined with the bull's-eye panes still in situ in the plaster. Three rim fragments of widely differing dimensions were found still embedded in the plaster that had originally framed them, their diameters being approximately 24 cm, 20 cm, and 10 cm. From the same area as the plaster frames came fragments of rims with diameters ranging from 16 to 20 cm, with various widths of folded rim and slight variations of color within the range of colorless, colorless blue-green, and blue-green colorless (Fig. C). Also found in the same context was a complete bull's-eye, restored from four separate pieces. This is sufficiently large to indicate that the profile of an entire circular pane would have been comparatively flat, that is, platelike rather than bowl-shaped. The smallest pane embedded in plaster has a plain rim; the remainder of the rims from this season's excavation are folded, usually with a simple backward fold but sometimes with a more complex return, the signature, perhaps, of a master glassblower.¹³ One should also note the existence of one fragment of crown glass that is purple in color, perhaps indicating that the Amorium church was furnished, at least in part, with stained glass.¹⁴ These fragments provide valuable new information about the production of Byzantine window glass and add further confirmation to the view that the craft existed quite independently of western traditions.¹⁵

Three middle Byzantine copper coins were identified among the numismatic finds from the church. One (SF3068) is an issue of Theo-

29; A. H. S. Megaw, "Notes on Recent Work of the Byzantine Institute in Istanbul," *DOP* 17 (1963), 365. The use of glass windows set in plaster frames has a long history in the Near East; cf. N. Brosh, "Glass Window Fragments from Khirbet al-Mafjar," in *Annales du 11e Congrès de l'Association internationale pour l'histoire du verre* (Amsterdam, 1990), 253.

¹³The thinness and fragility of the panes would suggest that they were manufactured at Amorium, although not necessarily by locally based glassmakers. No conclusive evidence has yet been found of glass production at the site.

¹⁴For dark purple-red glass from the Zeyrek Camii (south church of the Pantokrator complex) in Istanbul, see Megaw, "Notes," 349 and 363.

¹⁵See J. Henderson and M. Mundell Mango, "Glass at Medieval Constantinople: Preliminary Scientific Evidence," in Mango and Dagron, *Constantinople* (as above, note 11), 343, 346–48, and 356.

philus that had been restruck by Basil I, and it perhaps gives some hint of when the church (and city) was reoccupied after the sack of 838, while from the same context came a coin (SF3069) of Constantine VII, overstruck on a Class 4 issue of Romanus I. The third example (SF3177) was an anonymous follis of Class D. The most attractive find of the season is undoubtedly the silver miliaresion (SF3072) of John I Tzimiskes that was picked up from the surface immediately north of the church.

LOWER CITY, TRENCH AB/LC

Work began with the opening of a sondage immediately outside and to the west of the city gate and fortification wall, the intention being to investigate further the roadway, the later phases of which had been examined in 1992.¹⁶ The sondage, measuring 2 m square, was cut within the existing trench (Trench AB1), and eight contexts were identified. The uppermost was the surface left by the previous excavation and comprised a thick layer of mortar rubble (in places some 0.68 m deep), which would appear to have been deposited when the fortifications were built. Below this was a very hard-packed layer, extending as far as the upper part of the gateway foundations. The layer had probably become so compacted because it was used as the ground surface during the construction of the walls and gate, but alternatively it may be interpreted as an earthen road surface. Bedrock was reached at the bottom of the trench, and its surface appeared to have been trimmed back to accommodate the masonry foundations for the gateway. The discovery that the city fortifications were here built directly on a prepared surface of natural bedrock provides a contrasting picture to that obtained from within the triangular tower. A sondage in the east corner of the tower in 1993 had revealed part of a wall of large limestone blocks running below the tower on a different alignment to the circuit wall.¹⁷ These differences remain to be explained, but the evidence would seem to confirm the view that the addition of the Lower City walls radically altered the appearance and layout of the whole city, for, as well as necessitating the demolition of

some outlying buildings, their construction also called for the leveling of inconvenient natural outcrops.

Work in the area behind the gateway in the Lower City walls began in 1994. The intention was to uncover the road as it passed into the city and to investigate the nature of the buildings that had flanked the street.¹⁸ In 1995 the trench was given the new title of Trench LC (divided into two sections: LC1 to the west and LC2 to the east) in order to avoid further confusion with Trench AB. As in the previous season, the initial aim was to trace the road that passed through the gate and led off into the city. The surface of the road (Fig. 8) was found to consist of compacted earth and gravel, in which three distinct layers were identified. These were all very similar in appearance, each having roughly the same makeup and thickness (approximately 0.04–0.035 m). The road was found to run off in a gentle slope away from the gateway, having a width of some 3–3.5 m, flanked on either side with a layer resembling that which had been found above it. The road foundations were made of fairly loose rubble. It is clear that the road had been first laid down at the same time as the construction of the Lower City fortifications, since it occurs at the same level as the top of the foundation courses in the wall, and that it was subsequently resurfaced during a long period of use. Part of the road runs beneath a late wall that had been excavated in 1994 (= AM94/AB/Context 204). This does not lie immediately on top of the road surface but is divided from it by a mixed layer of earth. It seems, therefore, that there was an interval during which soil deposits accumulated over the street before the gateway was blocked off by new buildings.¹⁹

It was then decided to extend the trench northward behind the fortification wall. This area was designated as Trench LC3. It was hoped that this would lead to a better understanding of the late wall encountered in LC1–2 and reveal something of the buildings that had once flanked the street. The area sloped away from the rear of the fortifications and contained a good deal of debris fallen from the circuit wall. Below this debris a number of well-

¹⁶ *AnatSt* 43 (1993), 150.

¹⁷ *AnatSt* 44 (1994), 111; *Kazı XVI.2* (1994), 134–35, pl. 4.

¹⁸ *AnatSt* 45 (1995), 120.

¹⁹ *Ibid.*, 120, pls. xv(a) and xix(a).

constructed walls were revealed that formed a building complex with a large central room and courtyard. The room backed onto the city wall itself and was separated from the courtyard to the east by a wall of rubble and earth (Context 4) running north from Trench LC2. This was more poorly made than the side walls to the north and south, which were constructed of roughly shaped ashlar with a stone and mortar packing.

The complex can be dated no earlier than the eleventh century on the evidence of the small finds. Four anonymous folles were found in various parts of LC3, one coming from the rubble fill of one wall (Context 4).²⁰ In addition, a number of broken pottery vessels were recovered from LC3, together with one intact vessel. This was a flat-bottomed, one-handled cooking vessel (K.Env. AM95.1, from Context 9), measuring 13.2 cm in height and 13.7 cm in diameter around the body. Part of a terracotta lid was found covering the mouth of the vessel, which is scorched and blackened on the side of the body opposite the handle. This type of vessel was initially taken to be of a Turkish form of cooking ware, possibly dating to the thirteenth century, but the context precludes such an attribution; it would seem best to recognize these cooking pots as middle Byzantine, perhaps even direct antecedents of the Turkish ware.²¹ Certainly, there was no clear evidence for later Seljuk or Ottoman occupation of the buildings behind the Lower City fortification wall.

As yet this trench has failed to reveal any sign of buildings that might have flanked the street behind the gateway. Indeed, it would seem that the area immediately behind the city wall was left as an open space until the middle Byzantine domestic structures were built. The negative evidence provided by the road surface is, however, of great interest. Despite the construction of a massive new fortification wall and an imposing gateway, the city was not furnished with a paved street along one of its main thoroughfares. It stands in marked con-

trast to the paved and colonnaded plateiai that are a common feature of other late antique cities throughout the Near East.²²

UPPER CITY, TRENCH TT

Excavations in previous years had revealed substantial traces of the late medieval (Seljuk/early Ottoman) occupation of the Upper City immediately behind the defensive wall on both the south and the north side of the Upper City mound.²³ In 1994 the new northern trench had given the promise of similarly rich deposits for the middle Byzantine period, and it was the intention to investigate these levels during 1995. The inner face of the circuit wall was uncovered right down to its foundations, while a series of walls, some associated with it, others preceding its construction, were revealed.²⁴ Other features included an *opus signinum* floor, probably contemporary with the construction of the city wall, and a sequence of pits that must postdate the use of those walls assumed to be contemporary with the defenses. Other notable discoveries were a potter's kiln (Fig. 9) and associated material, including a large collection of wasters, two pithoi (Fig. 10), one of which is stamped, assumed to be part of the potter's equipment, and a hexagonal column that had been reused as the base for a revolving mortar.

Phase 1: Remains Predating the Restructuring of the Upper City

During the removal of the two pithoi it became clear that the context into which they were cut was the same as a large layer of re-deposited material associated with the reconstruction of the mound prior to the construction of the last Upper City defensive wall. The fact that the kiln also cut this layer, combined with its almost certain association with the pi-

²⁰SF3179 of Class I; the other three were SF3170 of Class A2, SF3080 of Class C, and SF3190 also of Class I.

²¹Cf. "Tsoukalia" with flat base and one handle, dated 8th–12th century; see Ch. Bakirtzes, *Βυζαντινὰ Τσουκαλολάγηνα* (Athens, 1989), pl. 3.1–5.

²²In this context one should also note the short stretch of street, paved with large slabs, that was excavated in 1990 just within the Upper City; see *AnatSt* 41 (1991), 219; *AnatSt* 43 (1993), 153.

²³*AnatSt* 43 (1993), 148–49; *AnatSt* 45 (1995), 121.

²⁴Because of the narrow width of the trench, it is impossible to extrapolate from the various stretches of wall the layout and nature of the buildings to which they belonged. It is hoped that this will become clear when the trench is enlarged in the 1996 season.

thoi, allows for a phasing of certain walls prior to the restructuring of the mound. These walls (Contexts 117, 173, and 189) can only be sensibly explained as having been truncated to allow for the operation of the kiln.

Another wall, visible in Trench ST, was found to extend southward under the city wall, although it is unclear whether this wall had been deliberately constructed before the defenses were raised on top of it in order to terrace the mound and so prevent soil dippage, or whether a preexisting structure had been adapted for this purpose.

Phase 2: Reconstruction of the Upper City Mound

The sterile nature of the deposits used during the restructuring of the mound, when compared with other redeposited contexts within the trench, suggests very strongly that soil was brought from outside the city. So it would appear that a deliberate attempt was made during the middle Byzantine period to increase the height of the Upper City mound and thus make it a more effective and defensible position.

The restructuring of the mound was followed by the construction of the latest city wall. The full height of this wall was exposed, and an elevation of its inner face was drawn. It now stands to an average height of 2.2 m, representing about ten courses of rough blockwork. The wall was found to be extremely well built; its foundations projected 0.18 m from the wall face, while a second projection at the level of the third stone course from the bottom, as well as providing further stability, allowed for the bonding of the wall with a mortar floor.

At the very end of the 1994 season, part of an *opus signinum* floor or pavement was exposed but not thoroughly investigated. Sadly, as revealed in 1995, this floor was found to have been much damaged, and less than 2 m² remained in situ. Nevertheless, enough had survived to indicate that the floor lies on the same stratigraphic level as the upper projecting course in the city wall foundations. This floor also overlaps Context 160, a wall that can be shown to be part of a building comprising walls in Contexts 107, 111, and 136. It seems that this structure, whose purpose remains un-

clear, is roughly contemporary with the construction of the city wall.

Phase 3: The Potter's Kiln

The exact position of the kiln (Fig. 9) in the stratigraphic sequence is unclear, but it can be placed after the middle Byzantine restructuring of the mound. It would also appear to precede the construction of the wall in Context 74, an extension or addition to another wall (Context 111), based on the assumption that the kiln and other features of the potter's workshop would have operated at a distance from inhabited structures. The kiln, therefore, can confidently be assigned to the tenth or eleventh century; it is hoped that further work in the area in the coming seasons will allow us to date it even more closely.

The kiln will be the subject of a separate, detailed report. It was the object of intensive and careful excavation, in which every context was planned, photographed, and sectioned. In addition, it was sampled for organic and carbon deposits wherever appropriate, and at the end of the season the area was covered and back-filled to preserve the delicate brick structure of the kiln.

Phase 4: Later Features

There was not sufficient time to investigate properly four pits, three of which postdate the structure comprising the walls in Contexts 111, 160, 187, and 136. They have similar dimensions and the same stratigraphic horizon, and they may provide evidence for the use of the north section of the trench as an open storage area after the abandonment and possible leveling of the structure mentioned above.

Trench TT thus fulfilled and even exceeded expectations, producing a wealth of material in terms of both finds and stratigraphy. The analysis of this mass of information is complex and requires further work. Some of the features remain enigmatic, notably a large, partially stone-lined pit and the reused hexagonal limestone column, both of which had been first noted in the previous year.²⁵ Large quantities

²⁵ The former was initially thought to be a wellhead; see *AnatSt* 45 (1995), 121, pl. xvi(a).

of charcoal and metal slag were recovered in association with these features. Partially burned wood and charcoal samples were also taken from grooves running vertically down two sides of the limestone column; these are presently being analyzed in the Malcolm and Carolyn Wiener Laboratory for Aegean and Near Eastern Dendrochronology at Cornell University. Results from these scientific studies may help to provide an absolute date for the use of the column, although it remains uncertain exactly how it functioned. It would appear to have acted as a base for some sort of revolving mechanism, possibly a press or mortar.

CONCLUSIONS

The evidence gathered so far from the trenches cut into the Upper City mound suggests that the area contained a thriving community within its walls during the middle Byzantine period. Because of the massive restructuring of the mound, this city may be regarded almost as a new foundation. It is, perhaps, surprising to find traces of industrial activity less than 100 m from the site of a large church, but the general picture of cramped and chaotic living conditions fits well with what is known of Byzantine daily life during the tenth and eleventh centuries.²⁶ Moreover, the vitality of the settlement is self-evident and gives archaeological substance to the notion of Byzantine revival and expansion under the Macedonian emperors. In particular, the rebuilding of the basilica church attests to the

will of the local community to restore and preserve at least part of the Lower City after the disaster of 838. Likewise, the construction of domestic quarters on top of and immediately behind the ruined walls of the Lower City would seem to indicate that the population of Amorium gradually recovered, for by the eleventh century some of the city's inhabitants were content to live in relatively exposed positions on the outskirts of the site. This period of peace and prosperity was brought to a rapid close in 1068 with the first Turkish incursion into central Anatolia.

The most important results from the excavations, however, relate directly to the siege of 838. The massive destruction level within the triangular tower and the severity of the damage suffered by the Phase I church not only provide striking proof of the Arab attack but also show that the Lower City walls and major buildings were maintained and that the settlement included the entire area of the Lower City in Theophilus' time. Amorium in the dark age was not confined to the fortified settlement on the Upper City, and the evidence obtained so far goes a long way toward proving that it remained a large urban site throughout the Byzantine period. Amorium may thus be regarded as a model for the small number of Roman cities in Anatolia that survived as major Byzantine centers after the mid-seventh century, but whereas places such as Ankara, Antalya, Konya, and Kayseri later became flourishing Turkish cities, Amorium sank into oblivion and, as a consequence, offers the archaeologist an ideal opportunity to investigate a major medieval site in its entirety.

²⁶C. Mango, *Byzantium: The Empire of New Rome* (New York, 1980), 81. Note also the presence of a glass workshop and coppersmiths' quarters in the center of medieval Constantinople: Henderson and Mango, "Glass," 346. The findings in Trench TT are also consistent with the impression gained from the Upper City survey, conducted by J. A. Lloyd in 1989; see *AnatSt* 40 (1990), 206, 209.

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